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| MICHAEL BEST & FRIEDRICH, LLP 100 E WISCONSIN AVENUE MILWAUKEE, WI 53202 | | | EXAMINER WEISKOPF, MARIE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3661 | |

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/657,951 | Applicant(s) BUCHER ET AL. | |
| | Examiner Marie A. Weiskopf | Art Unit 3661 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/15/03 & 4/26/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-58 have been examined.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

- Page 3, line 16 – Rear wheels 22
- Page 3, line 21 – Control levers 38
- Page 5, line 1 – Handle 66
- Page 10, line 12 – Flow Diagram 600

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "38" has been used to designate both foot rest and control levers. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- Claim 3 – "The lawnmower of claim 2..." There is no lawnmower mentioned in claim 2, please change to "The monitoring system of claim 2..."
- Claim 21 – The user interface is referenced in claim 21 and is dependent from claim 17; however, claim 17 does not mention a user interface. Examiner suggests changing to depending from claim 20 instead of 17.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 8, 10, 32, 38, 42, and 45-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Slifkin et al (US 5,955,942.) Slifkin et al discloses an invention for methods and means for monitoring events in vehicles. Slifkin et al discusses monitoring the events in a train, which is an outdoor implement.

- In regards to claim 1, Slifkin et al discusses a monitoring system comprising:
 - An accelerometer for collecting impact force data (Column 2, lines 29-30 and lines 55-58)
 - A GPS receiver for collection position data (Column 2, lines 19-25)
 - A processing module coupled to the accelerometer and the GPS receiver and having a filter module and a data extraction module. (Column 2, line 55 – Column 3, line 16)
 - A storage device coupled to the processing module and being operable to record the filtered impact data and the position data. (Column 2, line 55 – Column 3, line 16)
- In regards to claim 8, the monitoring system connects to the GPS to establish the position of the car and then passes the information to the microcomputer and may receive data if needed. This inherently is recording the impact and position data when the movement is sensed by the GPS. (Column 1, lines 15-28)
- In regards to claim 10, the monitoring system has a communication module coupled to the processing module and is able to transfer data from the monitoring system to an external device. Slifkin et al discusses having an antenna and communicating with a central station. (Column 2, line 64 – Column 3, line 16)

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- In regards to claim 32, a monitoring system of an outdoor implement that comprises:
 - A force sensing means for collecting impact force data of the system
(Column 2, lines 29-30 and lines 55-58)
 - A position sensing means for receiving global position data of the system
(Column 2, lines 19-25)
 - A filtering means for filtering the impact force data (Column 2, line 55 – Column 3, line 16)
 - An extracting means for extracting data from the global position data
(Column 2, line 55 – Column 3, line 16)
 - A storage means for logging the shock data and the extracted global position data (Column 2, line 55 – Column 3, line 16)
- In regards to claim 38, the force sensing means comprises at least one accelerometer measuring in at least one direction. (Column 2, lines 29-30 and lines 55-58)
- In regards to claim 42, a method of logging data for an outdoor power implement comprising:
 - Collecting impact force data (Column 2, lines 29-30 and lines 55-58)
 - Filtering the impact force data (Column 2, line 55 – Column 3, line 16)
 - Receiving the global position data (Column 2, lines 19-25)

- Logging the filtered impact force data and the GPS data. Slifkin et al has a storage device for the data, which would require the data to be logged.

(Column 2, line 55 – Column 3, line 16)

- In regards to claims 45 – 48, Slifkin et al discusses receiving data when the railcar is activated. Also, Slifkin et al discusses logging the data when there is movement sensed by the GPS receiver. Slifkin et al discusses the monitoring system being able to locate the position of the car and process the information to the microcomputer. It is inherent that this is done in order to process the data when the car is moving and also be able to record the position of the car when certain data is logged. (Column 2, lines 15-28) Finally, Slifkin et al discusses logging data when a key voltage is sensed in the electrical system from the accelerometer. (Column 2, lines 55-66)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 4-5, 49, 54, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slifkin et al (US 5,955,942) in view of article "Portable Data Acquisition System Helps Case Corporation Test Four-Wheel-Drive Agricultural Tractor in the Field."

- In regards to claim 2, Slifkin et al fails to disclose the monitoring system connecting to the power source of the outdoor power implement. The article does discuss connecting the power of the portable data acquisition system, or monitoring device, to the power of the outdoor implement. (Paragraph 9) It would have been obvious to one having ordinary skill in the art at the time of the invention to use the power from the outdoor implement if the monitoring system is portable so that the user does not have to worry about having a power system, such as with batteries, which could stop working due to not enough power.
- In regards to claims 4 and 5, Slifkin et al fails to disclose the monitoring system having a durable housing enclosing the components of the monitoring system, with the housing being resistant to magnetic and electrical fields and also air tight, water resistant and corrosion. The article specifically states that the self-contained data acquisition system is ruggedized for operation in harsh conditions. (Paragraph 7) It would have been obvious to one having ordinary skill in the art at the time of the invention to create the housing to be durable in order to keep the monitoring system safe from the outside environment.
- In regards to claim 49, Slifkin et al fails to disclose the method of logging data comprising the act of enclosing the monitoring system in a durable housing, mounting the housing on the power implement, electrically connecting to the power source of the power implement and removing the housing from the outdoor implement. The article, however, as discussed above discloses each one of these things. It would have been obvious to one having ordinary skill in

the art at the time of the invention to create a portable monitoring system with durable housing and being electrically connected to the outdoor implement in order to create a device that could be used on multiple machines. This would give the user, as discussed in the article, the ability to take the monitoring system to any machine and figure out the data for any specific vehicle.

- In regards to claims 54 and 56, as discussed above, Slifkin et al and the article combined together discuss:
 - Providing at least one outdoor implement
 - Connecting a self-contained modular monitoring system to the power implement
 - Collecting operating data
 - Storing the data
 - Downloading the operational data from the monitoring system to an external device
 - Analyzing the performance of the power implement based on the operational data
 - Filtering the data

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine these different acts in order to create a process for receiving data about different vehicles as discussed in the article. The process is needed so that correct data can be provided about the vehicle and if needed,

correction can be made to the vehicle or the data can be used just as information.

9. Claims 3 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article "Portable Data Acquisition System Helps Case Corporation Test Four-Wheel-Drive Agricultural Tractor in the Field" as applied to claims 2 and 54 above, and further in view of Lonn et al (US 5,657,224.) Lonn et al discloses a turf maintenance vehicle diagnostics and parameter condition logger.

- In regards to claim 3, Slifkin et al and the article both fail to discuss having sensors for measuring current, voltage and ambient temperature of the electrical system. Lonn et al does discuss a controller receiving information from a plurality of sensors for monitoring various parameters. (Column 3, lines 11-18) This, obviously, can include current, voltage and ambient temperature. It would have been obvious to one having ordinary skill in the art at the time of the invention to include these sensors in order to gain as much data as possible about the vehicle in order to be able to put the data to use.
- In regards to claim 55, Slifkin et al and the article both fail to disclose providing a lawnmower in the process for the monitoring system for the outdoor implement. Lonn et al discloses the turf maintenance diagnostics and parameter condition logger including a lawnmower. (Column 1, lines 20-21) It would have been obvious to one having ordinary skill in the art at the time of the invention to include a lawnmower in order to have a monitoring system that works on a plurality of different vehicles.

10. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over the article "Portable Data Acquisition System Helps Case Corporation Test Four-Wheel-Drive Agricultural Tractor in the Field" as applied to claim 54 above, and further in view of Herbling (US 3,755,750.) Slifkin et al and the article both fail to disclose the act of filtering the data through a filter circuit having a cutoff frequency of 50 Hz. It would have been obvious to one having ordinary skill in the art at the time of the invention to include the filter circuit in order to create the best data and use the cutoff frequency based upon the what is needed for each vehicle. Herbling does disclose a filter circuit comprising a resistor and a capacitor and stating that the values should be picked in order to create a cut-off frequency, such as 50 Hz. (Column 2, lines 37-42)

11. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over the article "Portable Data Acquisition System Helps Case Corporation Test Four-Wheel-Drive Agricultural Tractor in the Field" as applied to claim 54 above, and further in view of Tabler et al (US 6,195,605.) Both Slifkin et al and the article fail to disclose the act of collecting operator identification and job identification data on the user interface. Tabler et al discloses an impact monitor, which contains a user interface. The user interface communicates with digital storage keys which allow the vehicle to record the operator and job. (Column 5, lines 10-20) It would have been obvious to one having ordinary skill in the art at the time of the invention to include this information in the monitoring system so that when the data was removed from the monitoring system and evaluated it would be known who was using the vehicle and what was being done.

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12. Claims 6, 14-16, 33, 39-41, and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slifkin et al (US 5,955,942) in view of Cardillo (US 5,623,247.)

Cardillo et al discloses a maintenance alert cluster for a vehicle.

- In regards to claims 6, 14-16, 33, 39-41, and 51-53, Slifkin et al fails to disclose a user interface including a display and user input buttons. Also, Slifkin et al fails to disclose measuring the operational time of the vehicle and including a database of maintenance time periods. Cardillo does discuss a user interface which has input buttons for inputting information into the alert cluster and the list display lighting when there is a need for maintenance. (Column 2, lines 52-55) Cardillo also discusses measuring the operation time of the vehicle and being able to set the desired intervals for performing preventive maintenance. (Column 1, lines 52-55) It would have been obvious to one having ordinary skill in the art at the time of the invention to include the maintenance alert cluster in the monitoring system in order to easily find when a vehicle needs a scheduled maintenance.

13. Claims 7 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardillo (US 5,623,247) as applied to claims 6 and 33 above, and further in view of Tabler et al (US 6,195,605.)

- In regards to claim s 7 and 34, Cardillo and Slifkin et al fail to disclose the user interface receiving operator identification and a job identification entered by the operator. Tabler et al discloses an impact monitor, which contains a user interface. The user interface communicates with digital storage keys which allow

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the vehicle to record the operator and job. (Column 5, lines 10-20) It would have been obvious to one having ordinary skill in the art at the time of the invention to include this information in the monitoring system so that when the data was removed from the monitoring system and evaluated it would be known who was using the vehicle and what was being done.

14. Claims 9, 11, 13, 35, 37 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slifkin et al (US 5,955,942) in view of Tabler et al (US 6,195,605.)

- In regards to claim 9, Slifkin et al fails to disclose automatically beginning to record data in response to the initiation of the system movement sensed by the accelerometer. Tabler et al, however, discusses the accelerometer producing an impact signal when impact is sensed. (Column 4, lines 43-52) Only if the impact signal is above a certain threshold is an alarm state generated. It is inherent that the accelerometer starts recording data when the initiation of the system movement because there would be slight impact data. It would have been obvious to one having ordinary skill in the art at the time of the invention to start recording data when the movement began in order to get the most comprehensive data.
- In regards to claims 11 and 35, Slifkin et al fails to disclose the storage devise comprising EEPROM, however, Tabler et al discusses using EEPROM. (Column 6, lines 19-24) It would have been obvious to one having ordinary skill in the art at the time of the invention to use EEPROM since it is mostly commonly used.

- In regards to claims 13, 37 and 44, Slifkin et al fails to disclose the filter module comprising a weighed averaging module configured to generate a weighed average using the impact force data. Tabler et al discusses creating averages of the impacts to compare to a threshold value. The average works similar to an RC circuit. (Column 10, lines 34-54) It would have been obvious to one having ordinary skill in the art at the time of the invention to create weighed averages in order to not have to include an RC circuit and let the microprocessor provide the information necessary to decide if an impact has occurred.

15. Claims 12, 36 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slifkin et al (US 5,955,942) in view of Herberling (US 3,755,750.)

- In regards to claims 12, 36 and 43, Slifkin et al fails to disclose actually using a filter module comprising a resistor capacitor filter circuit having a cutoff frequency of 50 Hz. It would have been obvious to one having ordinary skill in the art at the time of the invention to include the filter circuit in order to create the best data and use the cutoff frequency based upon the what is needed for each vehicle. Herbling does disclose a filter circuit comprising a resistor and a capacitor and stating that the values should be picked in order to create a cut-off frequency, such as 50 Hz. (Column 2, lines 37-42)

16. Claims 17, 22, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slifkin et al (US 5,955,942) in view of Lonn et al (US 5,657,224.)

- In regards to claim 17, Slifkin et al fails to disclose that the monitoring system disclosed can be used on a lawnmower. Lonn et al discloses a lawnmower

comprising a frame, engine, mower deck and cutting implement in the turf maintenance vehicle diagnostic and parameter condition logger. (See Figure 1) It would have been obvious to one having ordinary skill in the art at the time of the invention to include the monitoring system with the diagnostic and parameter condition logger in order to be able to receive as much information as possible about a vehicle to provide in corrections that may be needed.

- In regards to claim 22, Slifkin does not disclose a lawnmower and therefore does not disclose a cutting implement sensor. Lonn et al does disclose a lawnmower and a cutting implement sensor. (Column 6, lines 3-11) It would have been obvious to one having ordinary skill in the art at the time of the invention to include a cutting implement sensor with the monitoring system is used on a lawnmower in order to be able to take the data of the cutting of the grass for impact data.
- In regards to claim 26, Slifkin discloses measuring impact force data in at least three directions. (Column 2, lines 29-32)
- In regards to claim 27, Slifkin et al discusses having an antenna and communicating with a central station that is transferring data is an external device. (Column 2, line 64 – Column 3, line 16)
- In regards to claim 28, Slifkin et al discloses the monitoring system connecting to the GPS to establish the position of the car and then passes the information to the microcomputer and may receive data if needed. This inherently is recording

the impact and position data when the movement is sensed by the GPS.

(Column 1, lines 15-28)

17. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lonn et al (US 5,657,224) as applied to claim 17 above, and further in view of the article "Portable Data Acquisition System Helps Case Corporation Test Four-Wheel-Drive Agricultural Tractor in the Field."

- In regards to claim 18, Slifkin et al and Lonn et al fails to disclose the monitoring system connecting to the power source of the outdoor power implement. The article does discuss connecting the power of the portable data acquisition system, or monitoring device, to the power of the outdoor implement. (Paragraph 9) It would have been obvious to one having ordinary skill in the art at the time of the invention to use the power from the outdoor implement if the monitoring system is portable so that the user does not have to worry about having a power system, such as with batteries, which could stop working due to not enough power.
- In regards to claim 19, Slifkin et al and the article both fail to discuss having sensors for measuring current, voltage and ambient temperature of the electrical system. Lonn et al does discuss a controller receiving information from a plurality of sensors for monitoring various parameters. (Column 3, lines 11-18) This, obviously, can include current, voltage and ambient temperature. It would have been obvious to one having ordinary skill in the art at the time of the

invention to include these sensors in order to gain as much data as possible about the vehicle in order to be able to put the data to use.

18. Claims 20, 29-31, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lonn et al (US 5,657,224) as applied to claim 17 above, and further in view of Cardillo (US 5,623,247.)

- In regards to claim 20, 29-31 and 50, Slifkin et al and Lonn et al fail to disclose a user interface including a display and user input buttons. Also, Slifkin et al and Lonn et al fail to disclose measuring the operational time of the vehicle and including a database of maintenance time periods. Cardillo does discuss a user interface which has input buttons for inputting information into the alert cluster and the list display lighting when there is a need for maintenance. (Column 2, lines 52-55) Cardillo also discusses measuring the operation time of the vehicle and being able to set the desired intervals for performing preventive maintenance. (Column 1, lines 52-55) It would have been obvious to one having ordinary skill in the art at the time of the invention to include the maintenance alert cluster in the monitoring system in order to easily find when a vehicle needs a scheduled maintenance.

19. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cardillo (US 5,623,247) as applied to claim 20 above, and further in view of Tabler et al (US 6,195,605.) Cardillo, Lonn et al and Slifkin et al fail to disclose the user interface receiving operator identification and a job identification entered by the operator. Tabler et al discloses an impact monitor, which contains a user interface. The user interface

communicates with digital storage keys which allow the vehicle to record the operator and job. (Column 5, lines 10-20) It would have been obvious to one having ordinary skill in the art at the time of the invention to include this information in the monitoring system so that when the data was removed from the monitoring system and evaluated it would be known who was using the vehicle and what was being done.

20. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lonn et al (US 5,657,224) as applied to claim 17 above, and further in view of Melone et al (US 2005/0144923.) Melone et al discloses a mower suspension system and method, however, Melone et al discusses in Figures 49-57, the wheels coupled to the frame without utilizing a suspension of any kind. (Paragraph 201) It would have been obvious to one having ordinary skill in the art at the time of the invention to have a lawnmower without a suspension in order to provide data on the impact forces that are felt by the user in that type of lawnmower.

21. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lonn et al (US 5,657,224) as applied to claim 17 above, and further in view of Heberling (US 3,755,750.) Slifkin et al and Lonn et al both fail to disclose the act of filtering the data through a filter circuit having a cutoff frequency of 50 Hz. It would have been obvious to one having ordinary skill in the art at the time of the invention to include the filter circuit in order to create the best data and use the cutoff frequency based upon the what is needed for each vehicle. Herbling does discloses a filter circuit comprising a resistor and a capacitor and stating that the values should be picked in order to create a cut-off frequency, such as 50 Hz. (Column 2, lines 37-42)

22. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heberling (US 3,755,750.) as applied to claim 24 above, and further in view of Tabler et al (US 6,195,605.) Heberling and the rest fail to disclose the filter module comprising a weighed averaging module configured to generate a weighed average using the impact force data. Tabler et al discusses creating averages of the impacts to compare to a threshold value. The average works similar to an RC circuit. (Column 10, lines 34-54) It would have been obvious to one having ordinary skill in the art at the time of the invention to create weighed averages in order to not have to include an RC circuit and let the microprocessor provide the information necessary to decide if an impact has occurred.

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the monitoring system discussed above in the use of a lawnmower discusses above in order to provide a complete data from the monitoring system for a lawnmower if that was the type of outdoor power implement to be used with the monitoring system.

Conclusion


23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 2005/0024195 to Bai discusses a resettable motor vehicle maintenance interval monitor by operating time
- US 6,656,397 to Discenzo discusses an integrated control and diagnostics system for a vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie A. Weiskopf whose telephone number is (571) 272-6288. The examiner can normally be reached on Monday-Thursday between 7:00 AM and 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


THOMAS A. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600